

4000, Southwestern-Jefferson Co Con

PROJECT ABSTRACT

The Southwestern-Jefferson County Consolidated School Corporation is a rural school district in Hanover, Indiana, serving 1357 economically diverse students in K to 12th grade. Southwestern's community has had a marked increase in poverty (47% percent) and an increase in the number of special education students. The Southwestern School Corporation will partner with Math Matters in Indiana, directed by Dr. Cathy Brown at Indiana University and with Switzerland County School Corporation to improve the mastery level of Indiana Math Standards.

After a review of data analyses and discussions among district leaders with Math Matters personnel, several things are obvious:

While the district has experienced gains in math achievement at the elementary level, considerable need remains at the Secondary level, especially in Algebra.

- The greatest percentages of high school student failure occur in the content area of mathematics.
- District low student performance on End of Course Assessments (ECA) for Algebra I indicates a major need.
- Observances of teachers in the Corporation indicate that teaching strategies in the traditional course of Algebra are often narrowly focused on procedures, rules, drill and practice, and is removed from many real-world technological contexts.

In today's global economy and technologically advanced world, the ability to think and reason mathematically is a Twenty-First Century skill. According to the U.S. Department of Education, students with a strong understanding of mathematics, especially in algebra, are better prepared to compete in the global job market. In addition, the National Council of Teachers of Mathematics, (NCTM) declares that those who understand and can do mathematics will have significantly enhanced opportunities and options for shaping their futures.

This data and research provide an urgency for our districts to rethink expectations, provide current methods for delivering math instruction, and to change our efforts to better support students in grades five through twelve in its mathematics/critical reading instruction.

Southwestern, Switzerland County, and Pope John/Shawe School Corporations are investigating the New Tech Project- Based Learning Model. Professional development activities will be extended beyond face-to-face training by members of the Indiana University New Tech Team to include on-demand support from the Math Matters in Indiana support Website. Innovative technology tools, such as document cameras, interactive tablets, flip videos, and additional laptops provided by this grant will enable math teachers to begin using project-based instruction and provide opportunities for teachers to collaborate to design activities. Additional AP classes will be offered.

To insure that instructional practices are impacting student achievement, rubrics and checklists will be designed for every project addressing technological presentations, collaboration, work ethic, and content. Students and staff will know immediately if additional workshops of instruction on the standards are needed. Scores on all high stakes testing will be documented as well.

In our small rural communities, students will be able to develop a global perspective as they prepare for college, the workplace, and their lives beyond the formal educational world.